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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/792,237

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Manabu Fujita

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EXAMINER

SMITH, PHILIP ROBERT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/792,237	Applicant(s) FUJITA ET AL.	
	Examiner PHILIP R. SMITH	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-14, 16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7, 10-14, 16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2x 12/30/09</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112, Paragraph One

- [01] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- [02] Claim(s) 7,10-14,16 and 18-21 is/are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
- [03] Each of the independent claims recites a transmission buffer and a reception buffer which are provided in the switching device and store transmission data and received data, respectively. The specification clearly supports “a transmission buffer and a reception buffer” but offers no support for the recitation that they “store transmission data and received data”. Nor is ‘storage’ a task that is necessarily attributed to a buffer.
- [03a] Figure 8 shows the recited buffers as “buffer 93a” and “buffer 93b”. They are pictured as a left- and right-pointing triangle, respectively, with one line pushing into the base of the triangle and another pushing out of the point. This schematic symbol, well-recognized by any electrical engineer, is understood not as a storage device (sometimes called a “buffer” – see, e.g., Gazdzinski (2001/0051766, paragraph [0406])), but as a “buffer amplifier”. As noted in the Wikipedia entry for “buffer amplifier”:

The interposed buffer amplifier prevents the second circuit from loading the first circuit unacceptably and interfering with its desired operation... Again, other properties of the ideal buffer are: perfect linearity, regardless of signal

amplitudes; and instant output response, regardless of the speed of the input signal.

[03b] In summary, the term "buffer" can refer to either a data buffer (which stores data that is being transferred from a 'fast' circuit to a 'slow' circuit) or an electrical buffer (which does not store data, but merely insulates one circuit from another as data is transferred). The claims recite a data-type buffer, but the Figures imply an electrical buffer. The specification supports only the umbrella term without making reference to storage *or* electrical insulation.

Claim Rejections - 35 U.S.C. 112, Paragraph Two

[04] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

[05] The rejection of claims 7,10-14,16,18 and 21 set forth in the previous Office action are withdrawn.

Claim Rejections - 35 USC § 102

[06] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

[07] The rejection of claim(s) 7, 10-14, 16, 18-21 as being anticipated by Fujita (2003/0085994) set forth in the previous Office action are withdrawn.

Claim Rejections - 35 USC § 103

[08] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

[09] The rejection of claim(s) 7, 10-14, 16, 18-21 as being unpatentable over Fujita in view of Frisch (2002/0173718) as set forth in the previous Office action are withdrawn.

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[10] Claim(s) 7, 10-14, 16, 18-21 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (2003/0085994) in view of Na (5,657,344).

[11] With regard to claims 7: Fujita discloses a capsular medical system comprising:

[11a] a capsular in-body unit ("capsule type endoscope 3," [0074]) having a radio communication device ("antenna 23," [0074]) which is inserted or swallowed to be introduced to a body cavity;

[11b] an extracorporeal device ("external unit 5," [0070]) comprising:

- a communication device for [bidirectional] communication with the in-body unit, which is arranged outside a human body;
- at least two [a plurality of] antennas connected to the extracorporeal device ("multiple antennas 11a to 11d," [0070]) arranged near a body surface to communicate data to the in-body unit;
- a switching device (comprising "antenna switch 45" [0071] and "send/receive switch 31" which is "controlled by a control circuit 34" [0058]) which switches the antennas;
- a detecting device ("control circuit 34" [0058]) which detects a communication state including a transmitting state where the extracorporeal device carries out transmission to the in-body unit, and a receiving state where the extracorporeal device carries out reception from the in-body unit, by controlling the switching device to switch the plurality of antennas at a predetermined time interval (sequentially switched antennas "11a, 11b,..., 11d" [0073]) to transmit a request for detecting a receiving strength with respect to the in-body unit, transmitting a request for detecting a receiving strength with respect to the in-body unit, transmitting the detection request to the in-body unit,

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and receiving data on the receiving strength from the in-body unit ("highest radio wave strength" [0075]);

- a reception and transmission switch ("send/receive switch 31" which is "controlled by a control circuit 34" [0058]) which is provided in the switching device and performs switching between a connection of the antenna with [a transmission circuit] ("sending circuit 32") and a connection of the antenna with [a reception circuit] ("receiving circuit 33");

[11c] wherein the extracorporeal device selects an antenna from the plurality of antennas in a preferable transmitting and receiving state in accordance with the data on the receiving strength received by the detecting device ("highest radio wave strength" as noted above), and

[11d] the extracorporeal device detects the communication status with the in-body unit, generates a reception and transmission switching signal and performs the switching of the antennas in the switching device by switching the reception and transmission switch based on the reception and transmission switching signal (see [0058] and [0059]).

[12] Fujita does not disclose:

- a transmission buffer and a reception buffer which are provided in the switching device and store transmission data and received data, respectively; and

[13] Na discloses a "conventional transmitting/receiving signal processing circuit". 3/8-10 states that "reference numeral 18 designates a reception buffer amplifier for a reception path, reference numeral 19 designates a transmission buffer amplifier for a transmission path".

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[14] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the transmission buffer and reception buffer disclosed by Na in the transmitting/receiving circuit disclosed by Fujita. A skilled artisan would be motivated to do so in order to prevent the antennae of Fujita from loading the sending circuit or receiving circuit of Fujita.

[15] With regard to claim 10:

[15a] Fujita discloses an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state ("highest radio wave strength" [0075]).

[15b] Fujita discloses that a number n of antennas whose receiving and transmitting states are detected is less than a number N of all of the attached antennas at a time of antenna switching ([0132]).

[16] With regard to claim 11: Fujita discloses that the antenna whose receiving and transmitting state is checked is determined based on the antenna which currently receives data ("highest radio wave strength" [0075]).

[17] With regard to claim 12:

[17a] Fujita discloses an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state ("highest radio wave strength" [0075]).

[17b] Fujita discloses a storing device which stores the communication state detected by the detecting device ("memory 47," [0072]).

[18] With regard to claim 13:

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- [18a] Fujita discloses an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state ("highest radio wave strength" [0075]).
- [19] With regard to claim 14:
- [19a] Fujita discloses an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state ("highest radio wave strength" [0075]).
- [19b] Fujita discloses that the detecting device controls the antenna selecting device to select the antenna when operation for connection for the transmitting to receiving is not establishable (as noted above).
- [20] With regard to claim 16: Fujita discloses that the antenna whose receiving and transmitting state is checked is determined based on the antenna which currently receives data ([0074]).
- [21] With regard to claim 18: Fujita discloses that the detecting device selects one of the at least two antennas arranged to communicate data to the in-body unit connected to the extracorporeal device, via the switching device, in response to a detected communication state corresponding to movement of the capsular in-body unit in the body cavity. This is the process described in [0075].
- [22] With regard to claims 19-21: As noted above, Fujita in view of Na discloses a capsular medical system and matching method, the system comprising:
- [22a] a capsular in-body unit ("capsule type endoscope 3," [0074]) having a radio communication device ("antenna 23," [0074]) which is inserted or swallowed to be introduced to the body cavity;

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- [22b] an extracorporeal device ("external unit 5," [0070]) comprising a communication device for bidirectional communication with the in-body unit, which is arranged outside the human body;
- [22c] at least two antennas connected to the extracorporeal device ("multiple antennas 11a to 11d," [0070]) arranged near the body surface to communicate data to the in-body unit;
- [22d] a transmission/reception switching section which switches communication direction with the in-body unit (sequentially switched antennas "11a, 11b,..., 11d" [0073]);
- [22e] a timing signal generating section which generates, based on a predetermined time interval to transmit a request for detecting a receiving strength with respect to the in-body unit, a timing signal (electronic devices inherently have clocking signals);
- [22f] an antenna selecting section which selects an antenna of the at least two antennas in a preferable transmitting and receiving state that communicates with the in-body unit among at least the two antennas ("highest radio wave strength" [0075]) in accordance with the received data on the receiving strength.
- [22g] a transmission buffer and a reception buffer which are provided in the switching device and store transmission data and received data, respectively (as noted above); and
- [22h] a reception and transmission switch which is provided in the switching device and performs switching between a connection of the antenna with the transmission buffer and a connection of the antenna with the reception buffer (as noted above),
- [22i] wherein the extracorporeal device detects the communication status with the in-body unit, generates a reception and transmission switching signal and performs the switching of the

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antennas in the switching device by switching the reception and transmission switch based on the reception and transmission switching signal (as noted above).

[22] As noted above, electronic devices such as the extracorporeal device disclosed by Fujita inherently have clocking signals (i.e. timers) which coordinate the activities of the device components. Therefore, all the processes identified above are inherently "related to" one another in that they are "based on" the timing signal.

Response to Arguments

[23] Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

[24] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

[25] A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

[26] Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP R. SMITH whose telephone number is (571)272-6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm.

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[27] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272 4764.

[28] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip R Smith/
Examiner, Art Unit 3739